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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/753,773	01/02/2001	Jean-Francois Le Pennec	FR919990115US1	1994

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EXAMINER

QUINONES, EDEL H

ART UNIT	PAPER NUMBER
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2131

DATE MAILED: 03/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

4

Office Action Summary

Application No.

09/753,773

Applicant(s)

PENNEC ET AL.

Examiner

Edel H Quinones

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 January 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

III. Detailed Action

1. Claims 1-17 are presented for examination.

Priority

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 9 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 9 recites the limitation "the list of said at least one anti-virus program comprised in the virus-free certificate" in lines 1-2. There is insufficient antecedent basis for this limitation in the claim. Claim 9 also recites the limitation "a list of anti-virus programs associated with the file in the table" in lines 3-4. There is insufficient antecedent basis for this limitation in the claim.

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Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 4, 6-8, 10, and 12-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Touboul et al. (U.S. Patent 6,154,844) in view of Van Oorschot et al. (U.S. Patent 5,699,431 and Van Oorschot hereinafter).

In regards to claim 1, Touboul et al. teaches a method comprising the steps of:

employing a virus-free certificate firewall (i.e. network gateway, figure 1, item 110) in controlling and filtering files (i.e. downloadables) using a virus-free certificate (i.e. inspector, figure 1, item 100) including:

receiving a file (figure 7, step 705);

if a virus-free certificate is required for the file, determining whether the a virus-free certificate is already associated with the file (figure 7, step 720);

if a virus-free certificate is already associated with the file, authenticating the associated virus-free certificate (figure 7, step 725),

if the virus-free certificate is authenticated, determining whether the file is virus-free or not (figure 7, step 755 and col. 10, lines 2-13);

if the file is virus-free ("YES" branch on figure 7, step 760), forwarding the file with the associated virus-free certificate (figure 7, step 770);

if the virus-free certificate is not authenticated ("NO" branch on figure 7, step 745) or if no virus-free certificate is associated with the file ("NO" branch on figure 7, step 720) determining whether the file is virus-free or not (figure 6, step 625 coming from figure 7 step 750 as stated in col. 9, lines 63-65, and if ref. to col. 8, lines 51-55);

if the file is virus-free , associating with the file a new virus-free certificate (figure 6, step 635 coming from figure 7 step 750 as stated in col. 9, lines 63-65), and forwarding the file with the new virus-free certificate (figure 7, step 770).

Touboul et al. does not teach that the virus-free certificate comprises a certificate signature. However, including a certificate signature within a certificate is old and well known in the art as shown by Van Oorschot (col. 1, lines 30-47).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to modify the system of Touboul et al. with the teachings of Van Oorschot to include a certificate signature within the certificate with the motivation to provide reasonable assurance that the certificate is authentic (Van Oorschot, col. 1, lines 39-45)

In regards to claim 4, Touboul et al. teaches that the virus-free certificate comprises a file signature (i.e. Downloadable ID) (figure 2, item 220) for determining that the file is virus-free.

In regards to claim 6, Touboul et al. teaches that the virus-free certificate further comprises at least one of the following:

- a file identification;
- a virus-free certificate authority identification;

a public key for decrypting the file signature;
a signature for authenticating the virus-free
certificate; and
an indication of the virus-free certificate validity (col. 6, lines 10-13).

In regards to claim 7, Touboul et al. teaches that the step of determining whether the file is virus-free or not includes:

- decrypting the file signature (i.e. Downloadable ID) using a public key comprised in the virus-free certificate (col. 7, lines 53-55), (col. 9, lines 36-41);
- hashing the file to generate a file digest; and comparing the decrypted file signature with the generated file digest (col. 7, lines 56-60), (col. 9, lines 41-52).

In regards to claim 8, Touboul et al. teaches that step of determining whether the file is virus-free or not (figure 7, step 755) comprises the further step of

if the file is not virus-free ("NO" branch on figure 7, step 760), discarding the file (figure 7, step 765).

In regards to claim 10, Touboul et al. teaches that the step of associating with the file a new virus-free certificate (figure 6, step 635) includes the step of requesting a virus-free certificate (i.e. sending file to inspector, figure 6, step 620) from a virus-free certificate authority (i.e. inspector). The Examiner infers that the step of requesting a certificate is implied in the action of sending a file to the inspector.

In regards to claim 12, Touboul et al. teaches updating a cache (i.e. data storage device) (figure 2, item 330) with a new virus-free certificate (i.e. signed downloadable) (figure 2, item 150).

In regards to claim 13, the claim limitation recites a system for carrying out the method of claim 1, therefore the same rejection applies.

In regards to claim 14, the claim limitation recites a computer program for carrying out the method of claim 1, therefore the same rejection applies.

In regards to claim 15, the claim limitation recites an article of manufacture comprising a computer usable medium having computer readable program code means for causing a computer to effect the steps of claim 1, therefore the same rejection applies.

In regards to claim 16, the claim limitation recites a computer program product comprising a computer usable medium having computer readable program code means embodied therein for causing for comprising a computer to effect the steps of claim 1, therefore the same rejection applies.

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In regards to claim 17, the claim limitation recites a program storage device readable by machine, tangibly embodying a program of instructions executable by the machine to perform the method steps of claim 1, therefore the same rejection applies.

5. Claims 2-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Touboul et al. in view of Van Oorschot as applied to claim 1 above, in further view of Touboul (U.S. Patent 6,092,194).

In regards to claim 2, the combination of Touboul et al. and Van Oorschot teaches the system of claim 1 as discussed above.

The combination of Touboul et al. and Van Oorschot does not teach the steps of:

identifying the file in a table, said table comprising for each identified file at least one anti-virus criteria;

referring to the table and retrieving at least one of said at least one anti-virus criteria,; and
determining from said at least one anti-virus criteria whether a virus-free certificate is required for the file or not.

Touboul discloses a system for protecting a computer and a network from hostile downloadables (col. 1, lines 25-27).

Touboul teaches the steps of identifying the file (i.e. downloadable) in a table (i.e. security database) (figure 2, item 240), said table comprising for each identified file at least one anti-virus criteria (i.e. security policy) (figure 6A, step 606);

referring to the table and retrieving at least one anti-virus criteria (figure 6B, item 654),
and

determining from that anti-virus criteria whether a virus-free certificate is required for the file or not (figure 6A, step 620).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to modify the system of Touboul et al. and Van Oorschot with the teachings of Touboul to include the steps of identifying the file in a table, said table comprising for each identified file at least one anti-virus criteria; referring to the table and retrieving at least one of said at least one anti-virus criteria, and determining from said at least one anti-virus criteria whether a virus-free certificate is required for the file or not with the motivation to enable the system to allow or block downloadables according to the information stored in the table (Touboul, col. 2, lines 35-37).

In regards to claim 3, the combination of Touboul et al. and Van Oorschot does not teach that the step of referring to the table and retrieving at least one anti-virus criteria includes the step of determining whether or not the file satisfies the requirements of the anti-virus criteria.

Touboul teaches that the step of referring to the table and retrieving at least one anti-virus criteria includes the step of determining whether or not the file satisfies the requirements of the anti-virus criteria (figure 6C, step 664).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to modify the system of Touboul et al. and Van Oorschot with the teachings of Touboul to include that the step of referring to the table and retrieving at least one anti-virus criteria includes the step of determining whether or not the file satisfies the

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requirements of the anti-virus criteria with the motivation to enable the system to allow or block downloadables according to the information stored in the table (Touboul, col. 2, lines 35-37).

6. Claims 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Touboul et al. in view of Van Oorschot as applied to claim 1 above, in further view of Hailpern et al. (U.S. Patent 6,275,937 and Hailpern hereinafter).

In regards to claim 5, Touboul et al. teaches the system of claim 1 as discussed above.

Touboul et al., however, does not teach that the virus-free certificate further comprises a list of the anti-virus programs that have been executed on the file.

Hailpern discloses a collaborative method of virus checking data object in a network of servers (col. 1, lines 25-27).

Hailpern discloses a certificate (i.e. listing of the results of applying anti-virus checking) (col. 13, line 29) comprising a list of the anti-virus programs that have been executed on a file (col. 13, lines 30-36).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Touboul et al. and Van Oorschot with the teachings of Hailpern to include that the virus-free certificate further comprises a list of the anti-virus programs that have been executed on the file with the motivation to establish a collaborative method for processing the files (Hailpern, col. 3, lines 65-66).

7. Claims 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Touboul et al. in view of Van Oorschot in view of Hailpern in view of Touboul, in further view of Haber et al. (U.S. Patent 5,781,629 and Haber hereinafter).

In regards to claim 9, the combination Touboul et al. and Van Oorschot teaches the system of claim 1 as discussed above. The combination Touboul et al. and Van Oorschot as modified by Hailpern includes a certificate comprising a list of at least one anti-virus programs that have been executed on the file, as discussed for claim 5 above. The combination Touboul et al., Van Oorschot and Hailpern as modified by Touboul includes a table comprising for each file at least one anti-virus criteria, as discussed for claim 2 above.

Touboul et al. and Van Oorschot also teach that the step of authenticating the virus-free certificate may include validating the virus-free certificate (see Touboul, col. 6, line 11 and Van Oorschot, col. 1, lines 50-53).

The combination Touboul et al., Van Oorschot, Hailpern and Touboul, however, does not teach that the step of authenticating the virus-free certificate also includes:

Verifying the list of anti-virus programs comprised in the certificate against the list of anti-virus programs associated with the file in the table.

Haber teaches authenticating a list of documents (i.e. anti-virus programs) by verifying them against a list of documents registered on a table (i.e. at a later time, together with a collection of documents to be authenticated and their alleged certificates, such an authenticated list can be used to verify that (1) each of such documents is an exact copy of a respective document that was registered with the table of contents and (2) none of the documents on such list are missing) (col. 12 , lines 47-52)

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Touboul et al., Van Oorschot, Hailpern and Touboul with the teachings of Haber to include that the step of authenticating the virus-free certificate also includes verifying the list of anti-virus programs comprised in the certificate against the list of anti-virus programs associated with the file in the table with the motivation to provide an improved method of working with digital documents (Haber, col. 3, lines 53-54).

8. Claims 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Touboul et al. in view of in view of Van Oorschot as applied to claim 1 above, in further view of Ramasubramani et al. (U.S. Patent 6,233,577 and Ramasubramani hereinafter).

In regards to claim 11, the combination of Touboul et al. and Van Oorschot teaches the system of claim 1 as discussed above.

The combination of Touboul et al. and Van Oorschot does not teach that the step of associating with the file a new virus-free certificate includes the step of retrieving a virus-free certificate from a cache, said cache storing existing virus-free certificates.

Ramasubramani discloses a system for managing, in a proxy server computer, digital certificates for two-way interactive communication devices over the data networks (col. 1, lines 30-32).

Ramasubramani teaches the step of associating with a file (i.e. user account) a new certificate by retrieving a certificate from a cache (i.e. database), said cache storing existing certificates (i.e. To minimize the latency of obtaining certificates for each of the thin client devices, the certificate management module reserves a fixed number of free certificates signed

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by a certificate authority and their respective private keys in a certificate database and frequently updates the free certificate according to a certificate updating message. Whenever a user account is created for a thin client device, the certificate management module fetches one or more free certificates from the certificate database and associate the fetched certificates to the created account and meanwhile the certificate management module creates new free certificates with the certificate authority to fill in the certificate database.) (see Abstract).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Touboul et al. and Van Oorschot with the teachings of Ramasubramani to include that the step of associating with the file a new virus-free certificate includes the step of retrieving a virus-free certificate from a cache, said cache storing existing virus-free certificates with the motivation to minimize the latency of obtaining certificates.

Other Prior Art Made of Record

9. A. Touboul (U.S. Patent No. 6,480,962) discloses a system and method for protecting a client during runtime from hostile downloadables;
- B. Ramasubramani et al. (U.S. Patent No. 6,233,577) discloses centralized certificate management system for two-way interactive communication devices in data networks;
- C. Tso et al. (U.S. Patent No. 6,088,803) discloses a system for virus-checking network data during download to a client device.
- D. Waldin et al. (U.S. Patent No. 6,094,731) discloses an antivirus accelerator for computer networks;
- E. Murray (U.S. Patent No. 6,321,333) discloses efficient digital certificate processing in a data processing system; and
- F. Koehler (U.S. Patent No. 6,301,658) discloses a method and system for authenticating digital certificates issued by an authentication hierarchy.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Points of Contact

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edel H. Quiñones whose telephone number is 703-305-8745. The examiner can normally be reached on M-F (8:00AM-5:00PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz Sheikh can be reached on 703-305-9648. The fax phone number for the organization where this application or proceeding is assigned is 703-305-3718.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.



Edel H. Quiñones
Patent Examiner
Technology Center 2100

March 16, 2004



AYAZ SHEIKH
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